Delrin 1"

Work Order ID 112735

February-06-14 10:48:05 AM

112735

Item ID:	D3411-3		Accept	***N9000401 00***	Setup **Start** ***NS1***
Revision ID:					
Item Name:	Washer				**Stop** ***NS2***

Start Date:	2/06/14	**Start Qty:** 80.00	***80***	**Cust Item ID:**	
Required Date: 2/20/14		**Req'd Qty:** 80.00	***80***	**Customer:**	

Reference:

Approvals: Process Plan: MLS   Date: 14-02-06 Tooling: _____ Date: _____   Run **Start** ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ **Stop** ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	**Revision Nbr**								
D3411	REV A								

100 ***100*** Hardinge Hardinge CNC Lathe Small	Memo Turn as per Folio FA591 Rev: AA & Dwg D3411 Rev: A Deburr & Tumble as per Dwg D3411	0.00 0.00							DAS 025 14-02-15 80
110 ***110*** QC Quality Control	QC2- Inspect parts off machine FAI/FAIB Memo	0.00 0.00							DAS 14-02-15
120 ***120*** QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00				80	0		14/02/16

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: _____ Date: _____   Work Order update only ☐

Work Order: _____	DISPOSITION	AGAINST DEPARTMENT/PROCESS

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐   Crosstube ☐   Water Jet ☐   Engineering ☐
Machining ☐   Small Fab ☐   Prod. Eng. Coor. ☐   Quality ☐
Thermoforming ☐   Finishing ☐   Rec/Store/Packaging ☐   Other ☐
Large Fab ☐   Composite ☐   Supplier ☐   ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function

☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence

☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge

☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

_____
_____
_____

| Item ID: | D3411-3 | | | Accept | *N900040100* | Setup | Start | *NS1* |

Item ID: D3411-3   Accept   *N900040100*   Setup Start *NS1*
Revision ID:
Item Name: Washer   Stop *NS2*

Start Date: 2/06/14   **Start Qty:** 80.00   *80*   **Cust Item ID:**
Required Date: 2/20/14   **Req'd Qty:** 80.00   *80*   **Customer:**
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____   Run Start *NR1*
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____   Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Packaging Packaging	Identify as per dwg & Stock Location: 81042	0.00				80 ✓		14-2-18	DAS 26 9-89
	Memo	0.00							
140 *140* QC Quality Control	QC21- Final Inspection - Work Order Release	0.00				MLS 14-02-18			
	Memo	0.00				MLS 14-02-18			

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

≫DART AEROSPACE

QA Closed: _____ Date: _____   Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐	Crosstube ☐	Water Jet ☐ Engineering ☐
Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐ Other ☐
Large Fab ☐	Composite ☐	Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear
- ☐ Bending
- ☐ Centre Not Concentric
- ☐ Cracks
- ☐ Crimp/Kink/Ripple/Wave
- ☐ Cuffs
- ☐ Crushing
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Marks/Chatter
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

General
- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damage/Defect
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drawing
- ☐ Drill Holes
- ☐ Finish
- ☐ Fit/Function

- ☐ Folio/Program
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete/Unqualified
- ☐ Instructions Incomplete/Unclear
- ☐ Misaligned/off center
- ☐ Mislabeled
- ☐ Misread
- ☐ Off-set
- ☐ Out of Calibration
- ☐ Out of Sequence

- ☐ Outside Dimensions
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge

- ☐ Pressure/Forced
- ☐ Set-up
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

_____
_____
_____

Picklist Print

February-06-14 10:48:10 AM

Work Order ID: 112735

112735

Parent Item: D3411-3

D3411-3

Parent Item Name: Washer

Start Date: 2/06/14   Required Date: 2/20/14

Start Qty: 80.00   Required Qty: 80.00

Comments: IPP   A05.10.19New issueKJ/EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MDELRINR1.000		Purchased	No			100	f	24.2842	0.0136	2			

MDELRINR1.000
Delrin Round Bar 1"

** 02 59 14-02-15

Location	Loc Qty	Loc Code
MAT039	24.28421	
m127442	24.28421	

3 1.1

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: _____ Date: _____   Work Order update only ☐

Work Order: _____	DISPOSITION		AGAINST DEPARTMENT/PROCESS			
Part No. _____	Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐	Crosstube ☐ Small Fab ☐ Finishing ☐ Composite ☐	Water Jet ☐ Prod. Eng. Coor. ☐ Rec/Store/Packaging ☐ Supplier ☐	Engineering ☐ Quality ☐ Other ☐
NCR No. _____						

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design ☐									
Doc/Data ☐									
Equip/Tooling ☐									
Handling/Pre ☐									
Material ☐									
Operator ☐									
Offset/Setup ☐									
Process ☐									
Supplier ☐									
Training ☐									
Transport ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear	General			
☐ Bending	☐ Bend	☐ Folio/Program	☐ Outside Dimensions	☐ Pressure/Forced
☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance	☐ Set-up
☐ Cracks	☐ Broken/Damage/Defect	☐ Hardware	☐ Part Incorrect	☐ Temperature/Cure
☐ Crimp/Kink/Ripple/Wave	☐ Burrs	☐ Inspection Incomplete/Unqualified	☐ Part Lost/Missing	☐ Weld
☐ Cuffs	☐ Contamination	☐ Instructions Incomplete/Unclear	☐ Part Moved	☐ Wrong Stock Pulled
☐ Crushing	☐ Countersink	☐ Misaligned/off center	☐ Positioned Wrong	
☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Power Loss/Surge	☐ Other
☐ Inspection Strip in Tube	☐ Drawing	☐ Misread		
☐ Marks/Chatter	☐ Drill Holes	☐ Off-set	_____	
☐ Turning Sequence	☐ Finish	☐ Out of Calibration	_____	
☐ Wave/Twist in Tube	☐ Fit/Function	☐ Out of Sequence	_____	

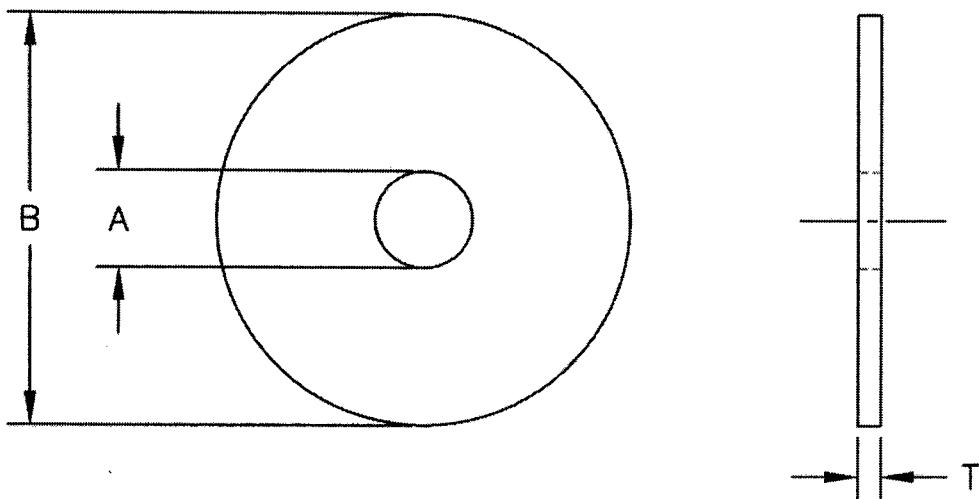| DART AEROSPACE LTD		Work Order:	112735
Description: Washer		Part Number:	D3411-3
Inspection Dwg: D3411 Rev: A			Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

| X | First Article | X | Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.875	+/-0.010	0.876	✓			
Ø0.203	+0.005/-0.001	0.206	✓			
0.063	+/-0.010	0.066	✓			

Measured by:		Audited by:		Prototype Approval:	N/A
Date: 14-02-15		Date: 14/02/16		Date:	N/A

Rev	Date	Change		Revised by	Approved
A	09.10.16	New Issue		KJ	

DESIGN CP	DRAWN BY CP	DART AEROSPACE USA, INC.	
CHECKED	APPROVED	PORT HADLOCK, WA	
		DRAWING NO. D3411	REV. A
			SHEET 1 OF 1
DATE 05.03.16		TITLE WASHER, DELRIN	SCALE NTS
A	05.03.16	NEW ISSUE	

SPECIFICATION CONTROL DRAWING

1) SPECIFICATION: **D3411—X WASHER**

DASH No.

WHERE 'X' IS THE SIZE PER THE FOLLOWING TABLE:

DASH NO.	BOLT SIZE	A (in)	B (in)	T (in) ±0.006	NON—METALLIC REPLACEMENT FOR:
—3	#10	0.203	0.875	0.063	AN970—3
—4	1/4	0.265	1.125	0.063	AN970—4
—5	5/16	0.328	1.375	0.063	AN970—5
—6	3/8	0.390	1.625	0.063	AN970—6
—7	7/16	0.453	1.812	0.109	AN970—7
—8	1/2	0.515	2.000	0.109	AN970—8

2) MATERIAL: DELRIN (DART SPEC. M—DELRIN—R)
3) FINISH: NONE
4) BREAK ALL SHARP EDGES 0.005 TO 0.010
5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
6) ALL DIMENSIONS ARE IN INCHES

RELEASED
05.09.06

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WORK ORDER
NO. 112755 MLS
14-02-06